

ABSTRACT

There is provided a frequency tunable oscillator that has less degradation of oscillation characteristics due to a parasitic reactance component or the like without mounting therein a lumped constant element such as a variable capacitance element. The frequency tunable oscillator includes a negative resistance element and a resonator which together form a feedback circuit. The frequency tunable oscillator further includes in at least a part of the feedback circuit, a distributed constant material so configured as to have a distributed constant such that an electrical length in the resonator is modulated, and a modification means for externally modifying the distributed constant material, wherein the oscillation frequency can be varied through the external modification by the modification means.